

describes previously known techniques for detecting fraudulent use of cellular telephones, such as evaluating call patterns, called numbers, locations from which calls are placed, etc, and making comparisons against a user's historical activity. The patent goes on to explain, however, that these approaches were not satisfactory in certain situations. To overcome these limitations, therefore, the patent discloses a different approach to preventing fraud, namely authentication.

In accordance with the teachings of the Baumann patent, a combination of biometric information that describes a user, and the unique signal characteristics of the cellular telephone, is employed to authenticate use of the telephone. Both of these items of information are collected, and compared against a pre-stored user profile. If the probability that there is a match between the collected information and a stored user profile, access to the communication system is granted.

The Office Action acknowledges that the Baumann patent does not teach the use of a knowledge base of anomalous activity that leads to the classification of potentially intrusive events, nor the creation and utilization of an attack model to provide adaptive responses to instructions in a communications network. To this end, therefore, the Office Action relies upon the Vaidya patent for such a teaching, and alleges that it would be obvious to employ a knowledge base and attack model in the system of the Baumann patent.

It is respectfully submitted that there is no reason apparent from the teachings of the references to combine them in such a fashion. The Baumann patent is based upon the granting or denial of access to a communication system, in accordance with identifying data that is received from the intended user in the cellular telephone. A knowledge base of anomalous activity and an attack model does not have any applicability in this approach to preventing fraudulent activity. The knowledge base and attack signature profile are designed

to be used in the situation where an unauthorized user has improperly gained access to the communication system, and operates to detect fraudulent use by identifying anomalous usage patterns. In the case of the Baumann system, however, the unauthorized user does not gain access to the network in the first place. Hence, there are no anomalous patterns of activity to be identified. In other words, since the user is authorized *a priori* in the system of the Baumann patent, all activity is considered to be authorized.

Accordingly, it is respectfully submitted that there is no reason to combine the teachings of the Vaidya patent with those of the Baumann patent. The two patents are directed to entirely disparate approaches to the prevention of fraudulent activity in a communications system, and there is no reason to employ the two approaches together, since the authentication procedure of the Baumann patent effectively eliminates the need for a knowledge base of the type described in the Vaidya patent.

Furthermore, it is respectfully submitted that, even if the two patents could be combined, the result would not be the same as the presently claimed invention. Among other elements, claim 1 recites the step of utilizing an attack model "to provide an adaptive response to intrusions in the wireless network." Claims 3 and 13-15 specifically recite the step of "developing a recovery model to recover from an intrusion of the wireless network." The Office Action refers to the disclosure in the Vaidya patent of a reaction module 38. It is respectfully submitted, however, that this module does not function to "recover" from an intrusion. Rather, as its name suggests, it only operates to "react" to the fact that an intrusion has occurred. As described in column 6, lines 21-23, this reaction can take the form of terminating an application session, tracing the session, and/or alerting a network administrator. At best, therefore, the module attempts to halt the active intrusion. There is no


disclosure that it functions to recover from the intrusion, however, and maintain the operability of the communication system.

In summary, therefore, it is respectfully submitted that there is no reason to combine the teachings of the Baumann and Vaidya patents, in the manner suggested in the Office Action. Furthermore, neither patent teaches a model to recover from an intrusion, and therefore their combined teachings do not suggest all of the elements recited in the rejected claims. Reconsideration and withdrawal of the rejections, and allowance of all pending claims are respectfully requested.

Respectfully submitted,

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